

**Project Subject/Title:** McGrath Lake Rx Burn-NHAL

**County:** Oneida

**TRS:** T38N, R7E s. 8,17

**Contact Person:** Tim Friedrich, 715-358-9201

**Type of Prescription:** Prescribed Burn

**Year Initiated:** 1996

**Abstract/Prescription:**

A 41 acre oak stand on the NHAL was selected for site prep treatment (prescribe burn and shelterwood). First a harvest of all white birch and aspen including the sapling residuals and some marked oak was conducted. Residual basal area was 40 square feet per acre. Advanced oak regeneration was common throughout the stand. Understory aspen saplings over 5 feet tall were heavily competing with oak. Up to ten acres of the stand was burned and the remaining acres left as a control. The burn occurred on 4/21/96. The burn objectives were to top kill hazel by 75%, reduce aspen sprouts by 50%. The site was monitored establishing ten plots (1/1000 acre) throughout the stand. All tree species were counted on the plot. The plots were monitored for 2 years and then then final year in 2003.

**Results:**

After six years the summary is as follows:

- 2/3 less pine, 20% less oak, 2 1/4 more red maple, 1 2/3 more hard maple, 3/4 less birch and 96% less aspen on the burn site.
- The oak regen established the best where there was no overstory.
- Deer browse is present throughout the stand.
- Aspen and rubus were effectively eliminated by burning.
- Oak regeneration outcompeted hardwood.
- Increase in red and sugar maple response to open canopy.
- Fire eliminated white pine and white birch in burn area.

**Discussion/Recommendations:**

- Fire can effectively eliminate competition for up to 6 years.

**Site/Conditions:**

**Habitat Type:**

**Covertime:** Oak

**RH = 46**

**Wind = west to south west at 2-4 mph**

**Enclosed Data Document**

OAK BURN

CORRESPONDENCE/MEMORANDUM State of Wisconsin  
Lake Tomahawk Ranger Station

DATE: August 25, 1995 FILE REF: 2400  
TO: Tim Mulhern  
FROM: Tim Friedrich  
SUBJECT: Proposed Prescribed Burn for Oak Regeneration Release

One of my goals for this fiscal year you identified was to initiate a prescribed burn study to establish and release oak regeneration in a first cut shelterwood situation. This study was to occur on the Oneida County Forest.

In a conversation I had with Cal Doering, lead worker on the southern unit of the Northern Highland American Legion (NHAL) State Forest, concerning this topic, he expressed interest for involvement on his property as he currently was assessing oak regeneration in several recently harvested stands. That being the case, in the interest of reduced costs I request you consider the following prescribed burn proposal on the NHAL State Forest, as an alternative.

BACKGROUND

A mixed oak/aspens stand is a common occurrence on somewhat dry habitat types (AQV - AVVib) common on the NHAL and in the Cassian-Woodboro block of the Oneida County Forest. Many of these stands have had the mature aspen component recently harvested. As a result, aspen saplings are prolific in the understory of these stands and are severely competing with oak regeneration common in these stands less than 1 foot in height. Harvest and regenerating the oak component will need to be addressed in many of these stands within the next 20 years. This may be difficult in some stands as a result of the dense understory aspen saplings present.

PROPOSAL

Over the next 5 years, this prescribed burn study will monitor the effect of fire in significantly reducing or eliminating aspen sapling, red maple stump sprouts, and hazel competition from oak regeneration present in the stand. It will also monitor the effectiveness of fire as a site preparation tool to establish oak regeneration. The effectiveness of different firing patterns will also be compared.

STUDY AREA

A 41 acre stand, Stand #2 of Compartment #36, is the proposed study area (see attached maps). It is located on Bird Lake Road within 5 miles of the Lake Tomahawk Ranger Station. A recent timber sale harvested all white birch and aspen, including 1-5" trees, along with marked oak in this stand. Residual basal area/acre is 40 square feet, but varies from 30 - 90 square feet/acre. Oak regeneration less than 1 foot in height is common in the stand. Understory aspen sapling root sprouts over 5 feet in height are severely competing with the oak regeneration. Five to ten acres of this stand are to be treated by fire. Remaining untreated acreage will be monitored as a control.

# Red Oak

FIELD SHEET

Department of Natural Resources

Legend

|                                       |                        |                   |                                   |
|---------------------------------------|------------------------|-------------------|-----------------------------------|
| County<br>Oneida                      | Town<br>Lake Tomahawk  | Date<br>11/7/1995 |                                   |
| Each square = 40 acres                | Section<br>8, 17       | T 38N R 7 E       |                                   |
| Scale<br>8" = 1 mile                  | Mapped by<br>Friedrich |                   |                                   |
| Owner<br>American Legion State Forest | Phone -<br>H:<br>O:    |                   | Section<br>18/17<br>'40" location |





